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MARSHALL STAR

Serving the Marshall Space Flight Center Community

Oct. 26, 2006

'Mission accomplished' for Marshall planetary team

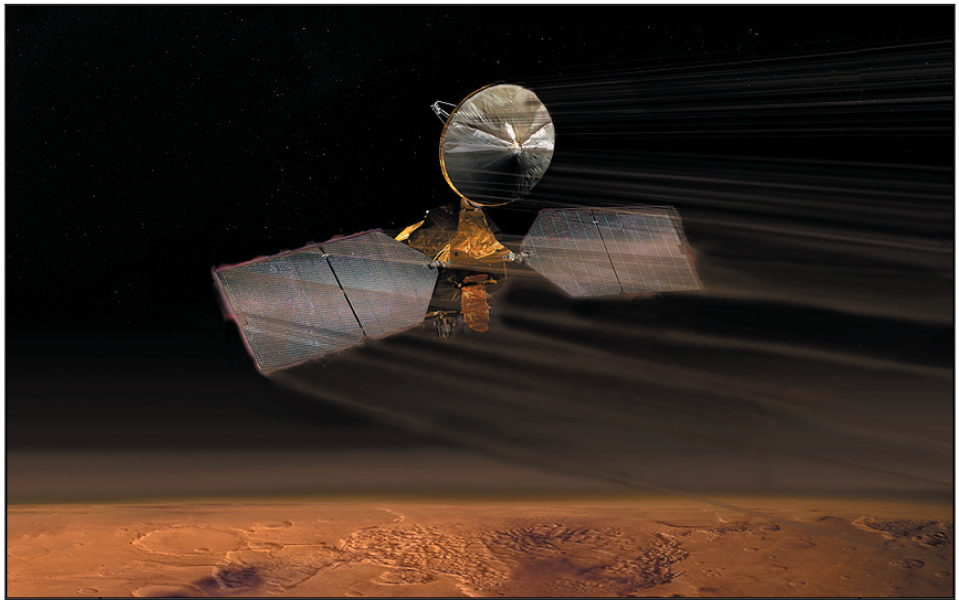
Mars Reconnaissance Orbiter now in science phase orbit

By Lori Meggs

The Terrestrial and Planetary Environments team in the Marshall Center's Engineering Directorate is celebrating its success in helping NASA's Mars Reconnaissance Orbiter reach its science orbit.

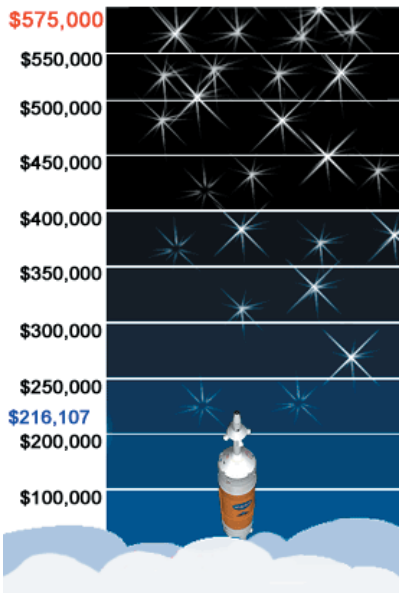
Scientists are using the Mars Reconnaissance Orbiter spacecraft to study the surface, monitor the atmosphere and probe underground, all to gain a better understanding of the distribution and history of water on Mars. In November, six

See Mars on page 4



NASA/JPL

An artist's rendering of the Mars Reconnaissance Orbiter during aerobraking operations to put the spacecraft into a circular orbit around Mars. The NASA spacecraft will measure thousands of Martian landscapes during its two-year science mission.



Marshall employees set sights on $575,000 CFC goal

Marshall employees already have put feet to this year's Combined Federal Campaign theme "Compassion In Action." As of Oct. 20, 545 employees in Marshall's civil service workforce have contributed more than $216,000 toward this year's campaign goal of $575,000. This represents more than 21 percent of the 2,498 civil service employees eligible to contribute. Employees have the opportunity to donate by cash, check or payroll deduction as the campaign continues through Nov. 17. For more information about the campaign, visit http://cfc.msfc.nasa.gov/ .

Marshall scientist Gena Gibbs finishes in Miss Alabama USA top 10

By Rick Smith

In September, Marshall Center scientist Gena Gibbs briefly hung up her research smock and put on a designer dress to compete for the title of Miss Alabama USA.

Gibbs, a Huntsville native, is a Qualis Corp. employee, part of the Jacobs Technologies contract team supporting the Marshall Center's Environmental Control and Life Support Systems Group.

Last month, she took the stage at Samford University in Birmingham, one of some 40 entrants in the Miss Alabama USA 2007 pageant. For the second time in two years, Gibbs finished in the top 10 — all the while juggling a full-time position at Marshall and pursuing her master's degree in chemistry at the University of Alabama in Huntsville.

Aside from the opportunity to compete for the crown, Gibbs sees the pageant as a way to encourage women toward technical pursuits. "It's just as important to me to be a role model," she says, "and an example for young women to pursue careers in math and science."

Gibbs typically spends her days running chemistry tests and managing the exercise laboratory in Building 4755, where volunteers run on treadmills and ride exercise bikes to produce sweat and other fluids, which are collected for use in recycling experiments and hardware development projects.

These studies have provided vital research leading to a number of new air and water recycling systems used by the American space program — including the state-of-the-art Oxygen Generation System delivered to the International Space Station during the STS-121 mission in July. Additional elements of the system will be delivered in December during STS-116. The system is expected to begin operation in early 2007, delivering clean air and drinkable water for the station crew, and reducing the amount of expensive replenishables that must be flown to space from Earth.

The Environmental Control and Life Support Systems Group is part of Marshall's Science and Mission Systems Office.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Emmett Given/MSFC

Qualis Corp. junior scientist Gena Gibbs, in her laboratory at Marshall.

Obituaries

John Thomas Belcher, 72, of Huntsville died Sept. 15. He retired from the Marshall Center in 1984 as an aerospace engineer. He is survived by his wife, Betty Jane Belcher; one son, Thomas Seth Belcher; two daughters, Kemper Elizabeth Key of Moulton and Jonna Anita Gamblin of Harvest; two stepdaughters, Patricia Craft and Susan Smith of Decherd, Tenn.; one brother, James Paul Wood of Juliette, Ga.; and one sister, Nancy Brewer of Ocean Springs, Miss.

John H. Sims, 74, of Harvest died Oct. 1. He retired from the Marshall Center in 1997 as a supervisor in mission operations integration. He is survived by two daughters, Brenda McDowell of Harvest and Janet Davidson of Knoxville, Tenn.

Kenneth John Vadasy, 72, of Madison died Oct. 3. He retired from the Marshall Center in 1999 as an aerospace engineering technician. He is survived by his wife, JoAnn Vadasy; two sons, Ken Vadasy and Michael Vadasy; and five daughters, Cheryl Crutchfield, Susan Walters, Julie Carlyle, Diane Vaughn and Beverly Harbin.

Elbert L. Sullivan, 85, of Fayetteville, Tenn., died Oct. 3. He retired from the Marshall Center in 1981 as a mathematician. He is survived by his wife, Sue Sullivan; two sons, Dexter Sullivan and Dwain Sullivan of Huntsville, Ala.; one sister, Shirley Hines; and one brother, Edward Sullivan of Lynchburg, Tenn.

The face of mission success is:

Judy Milburn, team lead for the safety and occupational health specialists of the Industrial Safety Department in the Safety & Mission Assurance Directorate

Safety slogans and accident prevention campaigns may be the most familiar face of the Industrial Safety Department, but Judy Milburn knows her team provides many services that are less visible — but even more vital — to the Marshall Center team. Judy and her team believe mission success is more easily achieved when people have a safe and healthy place to work, and can identify and control the hazards of the work they do.

What are the key responsibilities of your job?

I work with the Industrial Safety Department team to ensure a safe work environment for all Marshall employees. I mentor the other safety and occupational health specialists, and we liaison with our facility system safety engineers to prevent accidents wherever possible. Helping managers and employees resolve potential safety concerns is very important. Supporting supervisors in securing effective safety training for employees is another key task.

Doug Stoffer/MSFC

Judy Milburn

This year, I have concentrated on implementing the Safety, Health & Environmental Training Assessment for Supervisors. I'm also working with the SHE Training Subcommittee and other Marshall subject matter experts to develop training modules for SATERN, the System for Administration, Training and Educational Resources for NASA.

What is your education background?

I received my bachelor's degree in business administration, with a major in marketing, from Athens State University in Athens, Ala. After college, I completed the Safety Management Career Intern Program at the U.S. Army Materiel Development and Readiness Command. I gained experience in explosives, hazardous materials and operational safety, as well as ensuring Occupational Safety and Health Administration compliance for industrial processes.

How many years have you been at the Marshall Center?

I joined the Marshall team nearly 20 years ago, when NASA was adding expertise in safety and quality assurance in 1987.

What services does your job provide in support of the center's mission?

The Industrial Safety Department specialists and engineers perform a vast array of services for center personnel. We provide institutional and facility expertise to support safe Marshall operations. Our major efforts center on the safety of employees, facilities and work processes.

Inspection for compliance with OSHA requirements is just one of the services we provide. Other functions performed by our team include safety audits; fire prevention; safety training and awareness; assessment and risk analysis of hazardous operations; explosives safety consultation; monitoring program critical hardware moves; contractor safety and health plan approval; personnel safety certification; maintaining the Safety Concerns Reporting System; and mishap reporting.

We also help assure safety for offsite activities and special centerwide events like Safety Day and the Fall Cookout, and work closely with the Environmental Engineering & Occupational Health Office.

What do you hope to accomplish in your role this year?

Our team hopes to maintain a safe work environment for center employees, and improve our departmental processes. Each fiscal year, we have a SHE plan with specific goals for Marshall. In FY07, we will work with Marshall management to reduce mishap rates, obtain third-party certification for the SHE Program and assist directorates in achieving their SHE performance goals.

See Milburn on page 5

NASA gives Texarkana, Ark., students a look at the future of exploration

David Higginbotham/MSFC

Students welcome NASA astronaut Dottie Metcalf-Lindenburger during her visit to College Hill Middle School in Texarkana, Ark., Oct. 20. She joined Vanessa Suggs, the Elementary and Secondary Education Programs lead in the Marshall Center's Office of Academic Affairs, to talk to students about the Vision for Space Exploration and the future of the space program. They helped kick off the school district's involvement in the NASA Explorer Schools Program Oct. 19-20. The program is a three-year partnership between selected schools and NASA to foster interest in science, technology, engineering and math and also to encourage careers in exploration.

Mars

Continued from page 1

science instruments on board the orbiter will begin their two-year, systematic examination of Mars.

Marshall's Terrestrial and Planetary Environments team is marking completion of a five-month initiative to transition the orbiter's path from its original, elongated orbit to the circular one needed for science operations.

The spacecraft arrived at Mars on March 10, flying in an elongated orbit — the result of the high speeds required to economically travel from one planet to another. The High Resolution Imaging Science Experiment camera on the orbiter sent back the first image of Mars on March 24.

In the months that followed, discussions of Mars' atmosphere became the norm seven days a week for Marshall's planetary team members. In that time, it was their job to use the planet's atmosphere to move the spacecraft to the circular orbit needed to begin its science phase.

"Mars' atmosphere is so uncertain," said Hilary Justh, a member of the planetary team. "It's quite a learning process of trying to figure out what's going on there, and when — and if — we should recommend altering the orbit."

To arrive at the desired orbit, the planetary team provided an engineering-application atmospheric model for mission managers at NASA's Jet Propulsion Laboratory in Pasadena, Calif., to use in a process called aerobraking to slowly "walk-in," or shrink, the orbit of the spacecraft.

The process used controlled contact with Mars' atmosphere. Each pass through the upper portions of the atmosphere slowed the spacecraft's orbital speed. The flight team sent the bus-sized spacecraft through the upper fringe of Mars' atmosphere 426 times between early April and late August.

Marshall's team helped design this phase of the mission by providing a tool it developed called the Mars Global Reference Atmospheric Model, or Mars-GRAM. This model characterized upper air density, winds, temperature and pressure — properties that were critical to adjusting the path of the spacecraft.

By Aug. 30, the Mars Reconnaissance Orbiter had reached its circular orbit, with few or no adjustments — to the credit of a dedicated Marshall team.

"We have mixed emotions," said Jere Justus, a member of Marshall's team. "We are so excited to accomplish our goals of getting this spacecraft to its final orbit, but we are also sad that it's over. We've made many friends across NASA, and we hope they look to us again as we further explore the solar system."

"Mars is a neat planet to look at, with lots of comparisons to Earth, but looking at the atmosphere on every mission will further our understanding even beyond aerobraking," says Justh. "It's exciting to have another state-of-the-art spacecraft up there looking at it."

For more information on the Mars Reconnaissance Orbiter mission, visit http://mars.jpl.nasa.gov/mro/ .

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue is 4:30 p.m. Thursday.

Miscellaneous

Variophone credit card machine w/built-in printer, never used, $90. 534-8029

Hardwood flooring, 3/4" nail down red oak, +/-900 square feet, $2.50 per sq. ft. 227-0339/Dave

Reclining sofa and love seat, $300. 829-1296

Motorcycle helmet, HJC CL-12, full faced, double extra large, 2 faceplates, $75. 256-753-6230

AKC Weimaraner pups, ready for Christmas, $350. 539-0777

Freshly cut ash and maple trees, ready for splitting. 603-4675

Miniature Dachshund puppies, APR papers, 4 males, parents on-site, ready 11/4, $250. 233-5620

Dell computer, Dual Core Pentium-D 820, warranty, 512-RAM, Windows Media Center, $499. 655-1986

Freezer chest type, 26"Wx50"Lx36"H, $75. 256-682-1254

Sea World tickets, 3 adult, 2 children, $150, good until 2/31/07. 961-4000

Rabbit and guinea pig, cage, accessories, $35. 797-6173

AKC Sheltie, male, 5 months old, $100. 430-0759

Queen-size wooden waterbed (or regular mattress) frame with 12-drawer pedestal, $100 firm. 895-6722

Valhalla Masonic Garden, 4 side-by-side burial spaces, $6,000. 881-9421

Sunroom furniture, 8 pieces, sofa, loveseat, chair, ottoman, coffee table, end table, two lamps, $900. 379-3264

Black metal daybed, $40. 479-6073

Oak hardwood flooring, approximately 140 sq. ft., 3/4" nail down, butterscotch, $200. 895-9589

Eskimo art sculpture by Quebec artist, "Ice Fishing," $135. 882-1097

Iron daybed, white, $100. 739-2601

Trailmaster 3" body lift kit, fits Jeep CJ5, new in box, $45. 683-9364

Girl's coats: pink wool, Rothschild, size 10; black wool, and others, $15 each. 651-3315

Two upholstered arm chairs, cream green stripe, $70; four red/white 1950s chairs, $120. 679-1910

Maytag gas dryer, $75; Wood swing set w/slide, $125. 509-7907

Queen brass bed frame without mattress, $125. 881-0656

Oak entertainment center, $500. 829-0285

Golf clubs, men's left-handed, woods 1/3/5, irons 3-9, PW, SW, putter, no bag, $125. 882-3983

50s and 60s music, total of 80 albums, $200 total or $3 each. 256-656-2414

Polester-puff "feather bed", double bed size, very clean, $20; stadium seat, $7. 837-6776

NC SeaKayak, new, composite, 16.6", blue/aqua w/Seven2 carbon paddle, Thule rack and other accessories. 457-0206

Duck's Unlimited GAMO Black Duck's Delta air rifle, new in box, $40. 256-883-1003

Natural gas wall heater, 3 bricks, $75; Broyhill sofa & chair, $250; Baby changing table, $50; cradle, $40. 256-694-1217

Computer desk, large work space, file drawer, $50. 256-337-1471

Washer and dryer, good condition, $150. 837-0327

Oak pedestal table, lion claw feet, large leaf, high back carved spindle chairs, $250. 880-9025

Vehicles

1998 Cadillac Eldorado, 2 door, red, touring package, 58K miles, $11,000. 885-2293

2006 Chevy Cobalt LT, silver, 4.6K miles, automatic, all power, $21,500. 256-489-1783

Roketta dirt bike, $500; Roketta 4 wheeler, 70cc, $400. 256-858-5552

2002 Goldwing, GL 1800, warranty, extras, trailer available, $12,995. 256-655-3469

2003 Toyota Matrix, all options, auto, 78K miles, $8,750. 527-8116

2004 Chrysler Sebring convertible, gold, tan top, low miles, warranty, records, garaged, $14,500. 652-5177

Kubota M49 tractor, 60 hours, $15,000. 256-784-5299

1997 Chevy Camaro Z28, black, automatic, leather, T-Top, 153K miles, $6,500. 256-565-9918

1996 Buick Regal, 49K miles, auto, a/c, 28mpg city, recent service, $4,900. 837-1774

1999 Ford Explorer Sport, 2 door, blue, 131K miles, $4,500. 256-837-5580

1998 Dodge Ram Magnum, extra cab, 4-wheel drive, new tires, bedliner, 84K miles, $10,500. 683-8409

1997 Jeep Grand Cherokee Laredo, red, leather, 6 cyl., 4.0L, 183K highway miles, 23mpg, $3,995. 256-228-9513

2004 Toyota Tundra double cab, towing package, Linex, hard bed cover, JBL stereo, LE rims, $20,000. 714-3742

1996 Kawasaki KLR 250 street and trail motorcycle, 1,250 miles, 70mpg, $2,500. 426-9776

2001 Saturn S11, 4 door, auto, 125K miles, $3,975 firm. 256-753-2278

1999 Honda CR-V EX, auto, silver, 89K miles, 4WD, many accessories, garaged, $9,000. 850-4185

2002 Chevy Tahoe LS, white, 4WD, V8, automatic, all power, 45K miles, $17,000. 852-6548

1999 GMC Suburban, white, tan leather, 2WD, loaded, clean, 135K miles, one owner, $9,100. 679-7037

1992 Acura Integra GS hatchback, one owner, 61K miles, auto, sunroof, leather, $4,000. 534-2705.

1995 Cadillac Deville, loaded, $2,500; 1996 Cadillac Deville, loaded, $3,200; 1994 Mercury Cougar, $1,100. 256-520-2802

Wanted

Small screen, approx. 3"x3", portable LCD television. 256-777-8229/leave message

Found

Money on sidewalk between Bldg. 4200 and 4203, 10/17/06 at lunchtime. Call 544-7546 to identify/claim

NASA sponsoring 'Name Node 2' contest for students

NASA's Office of Education is sponsoring a competition for K-12 students nationwide to name the International Space Station's Node 2 module. The contest is the latest interactive challenge presented by the NASA Exploring Space Challenges Program, which provides educational investigations and curriculum for all primary and secondary grade levels.

All classrooms and schools are encouraged to participate. Deadline for registration is Nov. 17, and entries are due no later than Dec. 1. The winning name will be selected by NASA senior management in early 2007.

Node 2, scheduled for launch in spring 2007, will dramatically increase the living and working area inside the space station. It will become the primary point of passage between three station facilities: the U.S. Destiny Laboratory, the Kibo Japanese Experiment Module and the European Space Agency's Columbus Laboratory.

Information on the Node 2 Challenge, including rules and schedules, can be found at http://esc.nasa.gov .

Milburn

Continued from page 3

What is the biggest challenge you face?

I would say maintaining awareness of the essential balance between industrial and flight safety. Industrial safety focuses on the people, facilities and processes that enable flight missions to take place. Flight safety focuses on assuring safety during lift off and flight. Both areas are critical to mission success.

Another challenge we face is developing a system to aid supervisors in assuring that training requirements identified by the SHE Training Assessment are completed by their employees. We are currently working with SATERN personnel to explore options for tracking SHE training of both civil servants and contractors.

On the personal side, how do you like to spend your leisure time?

I enjoy traveling and spending time with my family. This year, I've traveled to Nassau, Bahamas; the Grand Cayman Islands; and Punta Cana in the Dominican Republic. I also enjoy visiting my son, Dustin, in Nashville. I like to shop, eat out on the weekends and rest on Sunday. My husband, David, graduated from the University of Florida in Gainesville, so watching the Gators play is a big part of our football season.

The writer, an ASRI employee, is the Marshall Star editor.

Safety Day 2006

Doug Stoffer/MSFC

Former NASA director of Mission Operations Gene Kranz addresses the standing-room-only crowd of Marshall Center employees at Building 4316 during his Safety Day keynote speech Oct. 19. The best-selling author and Apollo flight director was featured during a morning session called "Coffee and Kranz." Marshall team members enjoyed coffee and breakfast bread while Kranz shared his thoughts on mission success.

At the afternoon session of Safety Day in Morris Auditorium in Building 4200, supervisors representing Marshall directorates discussed the many challenges team members face relating to safety and mission success from topics suggested by managers and department heads. Participants in the "Supervisor's Safety Forum" included, from left, John Horack, assistant manager of the Science & Mission Systems Office; Steve Cook, manager of the Exploration Launch Projects Office; Mike Rudolphi, director of the Engineering Directorate; Dave Sadlowski, vice president of Aerospace Services for Integrated Concepts & Research Corporation in Huntsville; Roy Malone, director of the Safety & Mission Assurance Directorate; and Robert Lightfoot, manager of the Shuttle Propulsion Office.

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